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WALKER.JOHNSON BUILDING 1734 NEW YORK AVENUE NW.

WASHINGTON. D. C.
HARRY L. HOPKINS
administrator

July 20, 1938

Dear Sir:
The attached memorandum is in the nature of a report on method and tentative results of a project designed to outlined cultural areas within the farm population which have been worked out in the Rural Section of the Division of Sociel Research.

Since it was felt that the project would be of considerable interest to studerits of social problems and that the utility of the final results will depend to a large degree on the extent of agreement among rescarch people as to the soundness of the method, we are taking the liberty of submitting this project to you and other people interested in social research with the hope that you will give us the benefit of your criticisin and suggestions before the final delineation of these areas is set up and before we proceed to the application of similar methods of delineation of rural-nonfarm areas and of compiling basic data about these areas and experimenting with methods of sampling based on them. The Urben Section is also preparing a memoranum on the classification of cities.

We would especially appreciate your suggestions as to appropriate names for the Subregions now designated. by numbers.

Please address replies to Division or Social Research, attention A. R. Mangus.

> Very truly yours,
$\therefore \vdots \because:$
$\because: \%$

The project described in this memorandum was undertaken to determine the boundaries of regions within which the social and economic characteristics of the rural-farm population of the United States are reasonably uniform, and whose differences one from another are sufficient to make out significant variations in outline. Such areas have practical utility as districts of relatively similar economic and social conditions within which administrators can adapt programs to existing conditions. They can also serve students as a basis for definite description of area variations with regard to such characteristics as income, Jevel of living, relief nceds, fari tenancy, racial and ethnic composition, rate of population increasc, etc. In addition, they are useful in outlining the concentrations of socio-econoric disadvantage and advantage, i.e., problen and nonproblen areas. Still another advantage in defining socio-economic areas is the establishnent of a basis for representative samping of the population according to various characteristics by detemining the nature and extent of the areas to be sampled and by solecting the counties which will represent these areas with reasonable accuracy.

A wide range of soil, of climete, and of geographic conditions exists within the United States. Accompanying these are important variations in the economic and social characteristics of the population. Less complex than the country as a whole, many of the 48 States still include a wide range of physical and socio-economic characteristics. Within the smaller governmental units represented by the 3,072 counties,
a considerable degree of uniformity is frequently attained, but for most practical purposes of research or adninistration on a national scale the 3,072 counties are too numerous for individual consideration. The practical need for many purposes of description, planiling, study, and administration is, therefore, a limited number of regions lerger than counties but still preserving a sufficient degree of internal similarity in social and economic conditions as groups of related counties to be differentiated from adjoining groups of counties.

On the basis of results already obtained it is felt that the regional concept is, for many purposes, more useful than the State concept. A State average may mask wide variation and may not be represented by any county within that State, whereas a regional average tends to represent a relative uniformity from county to county and to present a reasonably accurate picture of the whole region.

For instance, Georgia as a whole averaged 36.8 percent Negro in 1930, the Appalachian section of that State averaged less than 10 percent, while a number of other sections averaged over 60 percent Nogro. These significant variations are hidden in a State average.

It may be said, therefore, that this study is an effort to give procision to the human geography of the United States by delimiting regions on the basis of significant differences in selected traits which lend thenselves to statistical treatment. Dr. Howard Odum has made $a$ notevorthy contribution to this field by dividing the States of the Nation into six groups and attaining as great a degree of similarity of culture within these large divisions as is possible to obtain by using whole States as units and by grouping them into only six large regions. ${ }^{1}$

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As a part of the Southern Regional Study subregions were delineated within the South based on the total population of each county, considering both its rural and urban traits. Steps have also been taken by C. E. Lively to regionalize rural Ohio and by P. G. Beck and J. D. Ensminger to regionalize rural portions of the States of Missouri, Illinois, and Indiana, while E. L. Kirkpatrick has laid the fourdation for regionalization of Minnesota, Wisconsin, and Michigan. While such efforts are veluable for detailed subdivisions of local areas, there is danger that such systems, when developed independentiy, will stop at State lines and will not result in a national scheme. Thet is attempted in this study is to set up a comprehensive general pattern on which there can be sufficient agreement to warrant its use as a framework for more detailed local analyses. Such analyses can then be oriented in the national picture. State boudaries within the United States are inaccurate demarcations of human institutions and characteristics. The Appalachian Region includes parts of West Virginie, Virginia, Kentucky, North Carolina, Tennessee, and Georgia. In terms of socio-economic as well as geographical characteristics the Kentucky courties within the Appalachian Region are much more similar to the Tonnossce courties within tho ropion then to those within Kontucky in the Bluo Grass section. This study represents an effort, therefore, to block out fundementa?ly homogeneous areas irrespective of State lines.

Physical geogreohers have carefully mapped the soil and climate zones within the United States, and agricultural economists have a useful concopt in the type-of-farming area--a concept which is the basis of much of the current agricultural manning. While type of farming is recognized
in this study as one determinant of rural culture, it has been used only as a starting point for marking out areas of cultural uniformity.

In this memorandum the basic small units are called subregions. They are grouped, in turn, into regions within which conditions are still more uniform, as a rule, than they are within most States.

It should be borne in mind that this is a first step and the regions delineated apply to the rural-farm population only. A second stop which is contemplated is to determine the regions of cultural uniformity within the rural-nonfarm population. The third step will be an attempt to unite the two types of groupings to obtain regions of rolatively homogenoity with respect to the rural-farm and rural-nonfarm population combined. For the purposes of the determination of rural-farm regions data for the rural-farm population only have been used in determining the regions to which counties should bc assigned. Those counties which contain cities have been included regardloss of the charactcristics of the urban population. The exception to this principle is the rogion extending from north of Boston to south of Now York. It is so predoninantly metropolitan that it has been set off from the farn regions. The finll result of the methods describud in the technical section of this memoramdum was the delinoation of 29 rural-farn rogions containing 210 subregions (see map 1).

## Region I - Tho Far West

This region includes the four far western States--California, Washington, Oregon, and Nevada--with the exception of three countics in Mashing and one county in California. In addition, it includes 14 Idaho counties. Much of the region consists of mountains, woodland, deserts, and semideserts, with crop lands limited largely to fortile valloys and high plateaus. The region contains 7 percent of the Nation's total population, but less than 4 percent of the rural-farm population.

| Populetion of the Far West 1930 |  |  |
| :--- | :---: | :---: |
| Olass | Nurnber | Percent of <br> national total |
| Total | $8,373,160$ | 6.8 |
| Rural-farm | $1,147,933$ | 3.8 |
| Rural-nonfarm | $1,616,049$ | 6.8 |
| Urban | $5,609,173$ | 3.1 |

The type of farming is voried. Fruit, rice, and mized faming predominate in the great valleys of California. Dairy and mixed farming are major types in western Washington and Oregon, while fruit is the dominant type in central Washington. In the northwestern section of the region is the Columbia Plateau wheat-proaucing area, while the east central portion consists largely of grazing land and isolated areas of irrigated farms.

Socially and culturally the Far West is a distinct region. It is set off from neighboving regions by a characteristically high plane of living, and by very iow population fertility. ${ }^{2}$ Though possessing these
$Z^{I n}$ this report the "erms "high," "low," and "internediate," when applied to a subarea refers to the rank of that subarea among all subareas with respect to its county median of the factor under discussion. An area is considered low in a given factor if it ranks anong the lowest third, high if it ranks among the highest third, and intermediate if it raniss among the middle third of all subareas in the United States when they are ranked fron low to high on that factor.
distinguishing characteristics the region is culturally diverse as is indicated by the fact that it combines 22 of the 210 subregions into which the country was divided. With respect to the rural-farm plane-of3
living index all but 1 of the 22 subregions rank among the highest third of the 210 subregions. With respect to the ratio of children to women in the rural-farm population all ranked among the lowost third (map 2). This is notably a commercial farming area in which the products of a comparatively small proportion of the farms were valued at less than $\$ 1,000$ in 1929. It is an area of high land values per capita, and of low farm tenancy, but a large proportion (41 percent) of the agricultural workers are wage laborers, a distinctly disadvantaged rural group (table l). A major problem in this region is the destitution of migratory and casual laborers. The relief burden has been heavy in some sections but low relief rates have been generally prevalont.

## Region II - Rocky Movatains

A sparsely settled region including western Montana, Wyoming, and Colorado, northeastern Washington, and northern and east central Idaho.


Most of the farm land is given over to grazing though some irrigated crop land is found in river valleys, notably in the Big Horn Basin

## 3

Subarea 20: This aren had less than 5,000 persons in the rural-form population, 1930.
in Wyoming and in the Grand River and San Juis Valleys in Colorado. This region combines eight cultural subregions including Silver Bow, Montana, an urban county contairing the city of Butte and containing a comparatively small farm population. On the basis of their rank among the 210 subregions, the Rocky Mountain subareas are among the middle third or slightly above the middle group with respect to the plane-of-living index. With respect to population fertility they rank among the lowest or the intermediate subregions. An exception is found in the Big Horn Basin (Subregion 27) where an exceedingly high ratio of children to women is found. With respect to the relief problem this region ranks intermediate. In February 1935 when general relief loads were at a peak, the countics of the region had from 5 to 30 percent of their population on relief rolls. Region III - Central Intermountain

This is a region of sparsely settled ranges and fertile valleys. It includes the State of Utah (with the exception of San Juan County), southeastern Idaho, and Uinta County, Wyoming. Much of the furm area consists of grazing land, although specialized crops aro grown in abundance in the fertile valleys.

Population of the Central Intermountain
Region 1930

| Class | Number | Percent of <br> national total |
| :--- | ---: | :---: |
| Total | 706,262 | 0.6 |
| Rural-farm | 199,905 | 0.7 |
| Rural-nonfarm | 183,564 | 0.8 |
| Urban | 322,793 | 0.5 |

Culturally this region is unique. A large proportion of its opulation consists of adherents of the Church of the Latter Day Saints, a
distinct religious group. Rural-farm fainilies in the region frequently settle in compact villages rather than on their isolated farms. They maintain a high average plane of living but at the same time have very high birth rates, the ratio of children to women being above 900. The region combines four subregions each of which is top ranking with respect to the child-women ratio and three of which rank among the highest third of all subregions when distributed according to the plane-of-living index. Farming is commercial to a very high degree. Farm ownership is predominant, relatively few of the farmers being tenants as compared with the national average.

The relief problem in this region has been intense. In February 1935 county relief rates ranged generally above 15 percent, and in a number of counties more than 30 percent of the population was on FPRA relief rolls during that month.

## Region IV - Southern Intermountain

Northern Arizona, northem New Mezico, and southern Colorado comprise this region. For the most part it is a grazing rogion consisting of intermountain woodland, grassland, and semideserts. Irrigated farming is practiced in the river valleys, particularly along the Rio Grande.


This is an area of rural poverty and of high relief intensity. Indians and Spanish-Americans comprise a large sector of the population. The plane-of-living index is extremely low while fertility rates are correspondingly high.

The region combines three subregions, all of which rank among the lowest third or near the lowest third in the case of subregion 36, with respect to plane of living and among the highest third with respect to population fertility. From one-half to three-fourths of the farms produced less than $\$ 1,000$ gross income in 1929.

## Region V - Mexican Border

This region includes southern Arizona and New Mexico, southwestern Texas, and Imperial County, California. It is a sparsely populated grazing region with irrigated valleys, notably the Rio Grande and the Pecos in Texas and New Mexico, the Imperial Valley in California, and the Salt River Valley in Arizona.

| Population of the Mexican Border Region |  |  |
| :--- | :--- | :--- |
| Class | Number | Percent of <br> national total |
| Total | 881,508 | 0.7 |
| Rural-farm | 204,914 | 0.7 |
| Rural-nonfarm | 320,119 | 1.4 |
| Urban | 356,475 | 0.5 |

With respect both to the plane-of-living index and to population fertility the region is intermediate. A high degree of cultural diversity is found, however, among the nine subregions it combines (see map 2). Region VI - Rio Grande-Gulf

A diverse region combining five subregions in the southern portion of Texas, which forms a wedge between the Lower Rio Grande River on the
west and the Gulf of Mexico on the east.

\left.| Population of the Rio Grande-Gulf |  |
| :--- | :---: | :---: |
| Region 1930 |  |$\right]$

The type of farming is varied. The region contains the Texas winter garden truck and fruit areas, range livestock, and cotton culture is found on the Rio Grande Plains and on the Gulf Coastal Prairie, and cotton, truck, and citrus fruit farming is practiced in the Lower Rio Grande Valley.

Equally varied is this region culturally as indiceted by the subarea medians show in toble 2. Of the five subereas two (Subregions 50 and 51) are intermediate with respect to both plane of living and population fertility. Subregions 48 and 49 both have a low plane of living but while the one is intermediate in fertility the other is low in this respect. Subregions 47 is different still having a high plane of living accompanitd by intermediate fertility (see map 2). A large proportion of the farm population consists of Mexicans, and reljef rates tend to be above the United States average.

Region VII - Southern Great Plains
Western Nebraska, Kansas, and Oklchoma, southeastern Wyoming, eastern Colorado, northwestern Texas, and northeastern New Mexico comprise this region.

This region includes the major part of the Winter Wheat Area, the Nebraska sand hills, the Colorado-Tyoming-Nebraska sugar beet area, and
other specialized farming districts, and the high plains mixed farming district in Colorado and New Mexico. It includes the well-known Dust Bowl and is generally subject to recurrent droughts.
$\left.\begin{array}{lrl}\text { Population of the Southern Great Plains } \\ \text { Region } 1930\end{array}\right]$

This region combines 10 subeegions all of which are of intermediate or high rank on the plane-of-living index, and all but 3 of which are intermediate with respect to population fertility. More than two.-fifths of the farmers in this region are tenants and three-firths of the cural population live on farms. Only 20 percent of the farms produced less than $\$ 1,000$ gross income in 1929 (table 1). Intensificd by drought, the region has had a serious relief problem during recent years. Region VIII - Northwestern Greet Plains

Central Montana, eestorn Wyoming, and western South Dakota are included in this range-livestock and wheat-producing area. iuch of the area has less than 15 inches of rainfall annually and all of it lies beyond the 20 -inch rainfall line and is subject to recurring drought.

| Population of the Northrestern Great <br> Plains Region 1930 |  |  |
| :--- | :---: | :---: |
| Class | Number | Percent of <br> national total |
| Total | 528,762 | 0.4 |
| Rural-farm | 252,382 | 0.8 |
| Rural-nonfarm | 143,876 | 0.6 |
| Urban | 132,504 | 0.2 |

[^1]The region combines seven cultural subareas, three of which are Indian Reservations--the Blackfect in Montana (Subregion 62), the Pine Ridge and Rosebud Reservations (Subregion 68), and the Cheyenne River and Standing Rock Reservations (Subregion 67) in the Dakotas. The Indian territories are distinct from the rest of the region. They rank consistently low in plane of living and high in population fertility. The other subareas are intermediate with respect to each of these factors except that Subregion 65 has a comparatively low ratio of children to women while Subregion 64 has a comparatively high child-women ratio (map 2). From 10 to 30 percent of the population of this region was on relief in February 1935. Region IX - Northeastern Great Plains

The State of North Dakota (except Sioux County), eastern Montena, western Minnesota, and northeestern and ccrtral South Dakota comprise this region. Cesh-grain farms constitute the dominant type throughout most of this region. Range livestock is found in the Bad Lands of western North Dakota. Mixed farming is practiced in the Minnesota and South Dakota sections.

Population of the Northeastern Great


| Class | Number | national total |
| :--- | ---: | ---: |
| Total | $1,156,037$ | 0.9 |
| Fural-farm | 691,565 | 2.3 |
| Rural-nonfarm | 303,719 | 1.3 |
| Urban | 160,753 | 0.2 |
|  |  |  |

Most of the region is west of the 20 -inch rainfall line and is subject to recurrent drought. The 1934 and 1.936 droughts left large proportions of the population destitute and dependent upon relief.

This region combines six subareas, including Roulette County, North Dakota (Subregion 70) which contains the Turtle Mountain Indian Reservation. Intermediate or high population fertility rates prevail throughout the region, and the plane of living is intermediate except in the Red River Valley of North Dakota and in central South Dakota where it is high as measured in terms of area ranks, This is one of the most rural of any of the intensive farming regions. Eighty-six percent of the population live in rural areas and sixty-nine percent of the rural population reside on farms.

Region X - Northern Lake States
This region embraces the northern and central portions of ifichigan and Wisconsin and northeastern Minnesota.

It includes the cut-over arcas in the north and the cut-ovor margins in the south. Iron mining and shipment constitute a major nonfarm industry in the Lake Superior sections. Dairy farming is prevalent throughout the region, but there is much self-sufficing, part-time, and mixe' farming.

| Population of the Northern <br> Region 1930 |  |  |
| :--- | ---: | :---: |
| Class | Number | Percent of <br> national total |
| Total | $2,397,943$ | 2.0 |
| Rural-farm | 952,480 | 3.2 |
| Rural-nonfarm | 582,292 | 2.5 |
| Urban | 863,171 | 1.3 |

Included in this region are five subareas. In these subregions both the plane of living and ratio of children to women are intermediate except in Subregion 77, a marginal area which ranks high in plane of living. Comparatively storile farms, exhausted timber resources, and loss of supplemental employment by part-time fermors have resulted in high relief intensity in this region and have placed it definitely in the categony of problem areas.

Region XI - Upper Mississippi River
A strong urban influence pervades this region which covers southern and eastern Wisconsin and Minnesota, northwastem Iowa, northern Illinois, and Lake County, Indiana. Its cities contain nearly 10 percont of the urban population of the United States but only 3.3 percent of the ruralfarm population.

Included are the Chicago-Milwankee, the Minneapolis-St. Paul, and the Rockford (Ill.) Metronolitan Areas, in ą̉dition to numerous other urban centers of vareing sizes. Dairy farming is general, the rogion being essentially a milk shed for the cities.

| Population of the Upper Mississippi <br> River Region 1930 |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Class |  |  |  | Number national total |
| Total |  |  |  |  |
| Rural-farm |  |  |  |  |
| Rural-inonfarm |  |  |  |  |
| Urban |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

The region combines three subregions including the Chicago-Milwaukee Lake Shore Area with a large suburban population but with relatively little farming. The subregions rank among the highest in rural-farm plane
of living and among the lowest in population fertility. On the whole, it is a region of prosperous farms and of comparatively little destitution among farm residents.

## Region XII - Northeast

Southeastern Michigan and the Ohio Lake region, the northern and eastern borders of Pennsylvania, New York, New Jersey, and New England (outside of New York-Boston Metropolitan Region), central Maryland, Fairfax County, Virginia, and New Castle, Delaware constitute this highly urbanized region. Nearly one-fourth of the urban population of the United States and nearly one-sixth of the rural-nonfarm population is found within its borders. On the other hand, only 6.6 percent of the rural-farm population is included.

Population of the Northeast Region 1930

|  |  |
| :---: | :---: | :---: |
| Class $\quad$ Nercent of |  |
| Number national total |  |


| Total | $20,972,471$ | 17.1 |
| :--- | ---: | ---: |
| Rural-farm | $1,963,590$ | 6.5 |
| Rural-nonfarm | $3,776,077$ | 16.0 |
| Urban | $15,232,804$ | 22.1 |

This is for the most part a dairy region though not uniformly so. Much of the region consists of mountainous and wooded areas with little agriculture. In the northeastern portion is found the White Mountains and Maine Woods. In the north central portion are the Adirondacks. In northeastern Pennsylvania and adjacent sections in New York are the Catskill-Pocono Highlands. In these sections forests and rugged country prohibit farming or restrict it to certain localities or to part-time
and self-sufficing facms. Fruit, truck, part-time crop-speciality, and general farms are important types in varjous localitios.

This region is made up of 11 cultural subareas within the farm population. These subregions rank among the very highest with respect to the plane-of-livir: index and among the lowest in population fertility. The only exceptions are Aroostook County, Maine (Subregion 93) with very high fertility and Subarea 91 with internediate fertility (map 2). Throughout the region the proportion of farm tenancy is low, although relatively large proportions of the farms produce less then $\$ 1,000$ gross income. Most counties have more rural-nonfarm than rural-farm population. Outside of the large urban centers relief rates have been generally low. Region XIII - Upper Miawest

This region includes the State of Iowa, except its northern and southeastern borders, north central Illinois, eastern Nebraska, southeastern South Dakota, southwestern Minnesota, and three Kansas, three Missouri, and two Indiana counties. It covers much of the area designated as the Corn Beit in type-of-farming studies. Iivestock and cashgrain farming predominate.

| Population of the Upper Midwest Region |  |  |
| :--- | :---: | :---: |
| 1930 | Percent of <br> Class | Number |
| national total |  |  |

Culturally it is one of the most uniform regions delineated. Though it includes 234 counties these combine into only 4 subregions. These subareas rank among the highest in plane of living and among the lowest or the intermediate in population fertility. It is a region of high farm tenancy, about one-half of all farmers being tenants. The farms are generally prosperous, land values are high, and few farms produce less than $\$ 1,000$ gross income. Eizcent in the western part of the region where drought and grasshoppers destroyed crops in 1934 and again in 1936, relief has not been a serious problem.

## Region XIV - Westerm Midwest

The State of Kansas, except the hion plains in the extreme west, the southeastern section and three counties in the northeastern order, and west central Missouri, ard Kay County, Oklahoma constitute this region. It is a cosh-grain and livestock-producing area with mixed farming prevalent around Kansas City and St. Joseph, Missouri in the eastern section.

| Class | Number | Percent of national total |
| :---: | :---: | :---: |
| Total | 2,123,068 | 1.7 |
| Rural-farm | 584,2,98 | 1.9 |
| Rural-nonfarm | 417, 764 | 1.8 |
| Uroan | 1,121,006 | 1.6 |

Included are two cultural subregions in each of which the plane of living ranks among the highest thira and population fertility among the lowest third of all subareas. Although these subregions rank amone the highest third on the plane-of-living index they rank considerably lower in this respect than do the subareas of the Upper Midwest. Another
distinguishing feature is a lower proportion of farm tenancy than in the Upper Midwest. Relicf rates have been generally low but wore intensiried by the drought of recent years.

## Region XV - Lower Midrest

This region covers northern Missouri, southeastern Kansas, southeastern Iowa, south central Illinois, southorn and westorn Indiana, and the section adjacent to Iouisvillc in Kentucky. Iivestock or general farming is prevalent throughout the region.

| Population of the Lower Midmest Region <br> Class | $\frac{1930}{}$ |  |
| :--- | :---: | :---: |
| Mumber | Percent of <br> national total |  |
| Total | $5,246,779$ | 4.3 |
| Rural-farm | $1,462,699$ | 4.9 |
| Rural-nonfarm $1,109,668$ | 4.7 |  |
| Urban | $2,674,412$ | 3.9 |

The region combines five rural-farm subregions, each of which shows low population fortility. The plane of living ranks intermediate or near intermediate, and is considerably lower then the other Midwest regions. Although comparatively large proportions of the farmers in the region operate low income producing farms, relief rates have not been particularly high except in isolatod localities.

Region XVI - Eastern lijwest
Southern Michisan, except the area around Detroit, eastorn and central Indiena, westorn and central Ohio, and those Kentucky counties adjacent to Cincinnati constitute this region in which genoral faing, livestock and cash grain are prodowinant farm types.

| Population of theEastern Midwest Region <br> 1930 |  |  |
| :--- | :--- | :---: |
| Class | Number | Percent of <br> National Total |
| Total | $6,556,191$ | 5.3 |
| Rural-farm | $1,429,684$ | 4.7 |
| Rural-nonfarm | $1,284,801$ | 5.4 |
| Urban | $3,841,706$ | 5.6 |

This region combines four cultural stibrogions of the farm population. The plane of living is uniformily high while population fertility is correspondingly low. It differs from Region XV owing to its higher plane of living and from Region XIII owing to its lowor plane of living and much lower percentage of farm tenancy. From the point of view of relief intensity it does not differ from the other Midwest regions.

## Region XVII - Allegheny

This region includes the State of Pennsylvania, except the northern and eastern borders, western Virginia, western Maryland, northern West Virginia, and southeastern Ohio. The sural-farin population comprises a relatively small proportion of the total for this region. More than one-half of the population is urban and an additional ono-third is classified as rural-nonfarm including suburbanites, villagers, and residents of small mining communities. Coal mining is prevalent throughout a large portion of the area, the oxception being the Shenendoah Valley and northern Virginia. The torpe of farming is varicd, including general dairy, fruit, livestock, parit-time, and self-sufficing.

$$
\frac{\begin{array}{c}
\text { Population of the Allegheny Region } \\
1930
\end{array}}{\text { Class Number national total }}
$$

| Total | $7,575,450$ | 6.2 |
| :--- | :--- | ---: |
| Rural-farm | $1,174,807$ | 3.9 |
| Rural-nonfarm | $2,417,892$ | 10.2 |
| Urban | $3,982,751$ | 5.8 |

The region combines nine subregions. Five of these subregions, which comprise the southern and central parts of the regions, rank intermediate with respect to the plane-of-living index and with respect to the ratio of children to women. The other four subregions rank high in plane of living and except the area incIuding Pittsburg and Wheeling (subregion 110) rank intermediate with respect to popnlation fertility. Except in the Shenandoah Valley, land values are comparatively low and large proportions of the farms produce very small incones. It is a region of high relief intensity. In February 1935 the majority of the counties had more than 15 percent of their population on relief rolls. Region XVIII - Appalackian

Southern West Virginia, certral Virginia, eastern Kentucly, easterm Tennessee, western North Carolina, and northern Georgia comprise this region.

It is a populous mountain region of self-sufficing and part-time farms, except in the Tennessee Valley where general farms constitute the major type and in the Virginia Piedmont where tobacco farms are found.

| Population of the Appalachian Region |  |  |
| :--- | :---: | :---: |
| Class | Number | Fercent of <br> national total |
| Total | $4,237,705$ | 3.5 |
| Rural-farm | $1,967,458$ | 6.5 |
| Rural-nonfarm | $1,420,619$ | 6.0 |
| Urban | 849,628 | 1.2 |

Culturally this is a distinct region. It combines seven subregions, each of which ranks among the lowest in plane of living and among the highest in population fertility. Farm income is very low. From 30 to more than 60 percent of the total value of farm products are consumed on the farm, and from 73 to 96 percent of the farms produced less than $\$ 1,000$ gross income in 1929. In this poor land region, which contains nearly 7 percent of the Nation's farm population, relief rates have beer persistently high particularly in the western sections where very little commercial forming prevails.

## Region XIX - North-South Border

This region includes eastern Kentucky, central Tennessee, southern Illinois, south central and southwestern Missouri, and the northwestern part of Arkansas. General, livestock, self-sufficing, and part-time farming are prevalent in this region with tobacco farms found in several localities in the eastern section.

Population of the North-South Border

|  | Region 1930 |  |  |
| :--- | ---: | :---: | :---: |
| Class | Number | Percent of <br> national total |  |
| Total | $2,633,968$ | 2.1 |  |
| Rural-farm | $1,401,808$ | 4.6 |  |
| Rural-nonfcrm | 601,450 | 2.5 |  |
| Urban | 630,710 | 0.9 |  |

In many respects this is an interstitial region. It separates the Midwest from the southern highlands on the east and on the west, and from the Old South in the center. The central portion lies between the Appalachians on the east and the Ozarks on the west.

The six subregions included rank intermediate with respect to fertility rates. Two of the subregions rank low while four are intermediate in the plane of living of the farm population. Thile relief rates tend to be high in this region the relief problem is much less intense than in either the Appalachian or Ozark areas adjoining it.

## Region XX - Ozark-Ouachita

This region lies in southern Missouri, northwest Arkansas, and eastern Oklahoma. It is an area of poor land upon which self-sufficing, cotton, and general farming is practiced.

Population of the Ozark-Ouachita Region 1930

|  |  |  |
| :--- | :---: | :---: |
| Class | Number | Fercent of <br> national total |
| Total | 791,808 | 0.6 |
| Rural-farm | 483,943 | 1.6 |
| Rural_nonfarm | 201,443 | 0.9 |
| Urban | 106,422 | 0.2 |

This region combines three subareas in each of which the plane of living is exceedingly low while population fertility is correspondingly high. Land is very poor and farmers have little opportunity to supplement their meager income by outside wages. Relief rates have been high. Region XXI - East Central OkIahoma

This region extends north and south through the east central part of Oklahoma. It includes the Tulsa Metropolitan Area and the Oklahoma oil
fields. The type of farming is varied, with cotton, livestock, and general farms predominating in different sections.

| Population of the East Central <br> Region 1930 | Percent of <br> Class | Number |
| :--- | ---: | :---: |
| national total |  |  |

In the six cultural subregions inclvded in this region the rural-farm plane of living is low or intermediate while the ratio of children to women is high or intermediate. It is a region of high farm tenancy and very high relief intensity.

## Region XXII - Central Texas-Oiklahoma

This region stretches from the New Mexico border on the west to the Black Prairie on the east, and from the Coastal Prairie on the south to the Okl.ahoma Panhandle on the north. It also includes the southeastern part of Oklahoma. Cotton and range livestock constitute the major types of farming throughout the region.

| Class | Number | Percent of national total |
| :---: | :---: | :---: |
| Total | 2,849,496 | 2.3 |
| Rural--farm | 1,259,242 | 4.2 |
| Rural-norfarm | 506,946 | 2.1 |
| Urban | 1,083, 308 | 1.6 |

Included in the region are seven cultural subregions each of which is intermediate with respect to plane of living. Likewise, each subregion is
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intermediate or ner intermediate with respect to population fertility. Low crop prices and drought heve made this a major problem region from the point of view of relief intensity.

Region XXIII - The Mississippi Delta
This region includes those counties in Mississippi, Arkansas, and Louisiana located in the bottomlands of the Mississippi River. It is a cotton producing region in which nearly all of the farm income is from this one cash crop.

| Population of the Mississippi. Delta <br> Region 1930 |  |  |  |
| :--- | :---: | :---: | :---: |
| Class | Number | Percent of <br> national total |  |
| Total | $1,330,498$ | 1.1 |  |
| Rural-farm | r70,494 | 2.6 |  |
| Rural-nonfarm | 148,946 | 0.6 |  |
| Urban | 411,058 | 0.6 |  |

Culturally this region is relatively uniform and has therefore no subdivisions. With respect to the plane of living it ranks very near the bottom. The low level of living is uniquely accompanied by a low ratio of children to women, the region ranking among the lowest third of the areas in this respect. In the median county 86 percent of the farmers are tenants, and '75 percent of tho maral-farm population are Negroes. Farm tenancy and low farm prices form the basis of the major problems of the region. Though general relief rates have been low in recent years following the ineuguration of the Rural Rehabilitation Program, and the Agricultural Adjustment Administration Program they were high in 1933 and 1934 and again in 1938.

## Region XXIV - The Old South

Eastern Texas and the cotton producing sections of Louisiana, Arkansas, Tennessee, and Mississippi. (outside the Delta region), and the cotton and tobacco producing sections of Alabama, Georgia, Florida, South Carolina, Morth Carolina, and Virginia are here designated as the Old South. Cotton farms constitute the major type throughout most of the region, but the tobacco areas of Georgia, North Carolina, and Virginia, the peanut arca of Virginia and North Carolina, a fruit area in east central Georgia, and a truck area in Copiah County, Mississippi, are also included.

| Pupulation of the Old South Region <br> 1930 |  |  |
| :--- | ---: | :---: |
| Class | Number | Percent of <br> national total |
| Total | $14,308,926$ | 12.1 |
| Rural-farm | $8,278,658$ | 27.5 |
| Rural-nonfarm | $3,059,548$ | 12.9 |
| Urban | $3,470,720$ | 5.0 |

The region is large and populous. More than one-fourth of the Nation's farm population reside withinits borders, and nearly all Negro farmers outside of the Delta are found here. The region combines 38 cultural subregions, differentiated on the basis of various farm population factors. With respect to the rural-farm plane-of-living index these 38 subregions are fairly uniform. Except for two small urbanized subareas (subregions 173 and 183) they all rank among the lowest third of the 210 subregions on that basis. With respect to rural-farm population fertility as measured by the ratio of children to women the subareas of this region rank from intermediate to high.

Farm tenancy and low prices for cotton form the basis of the major
problens of this resion. General relief rates were hish in 1933 and 1934. They declined with the inaugration of the Rurai Rohabilitation Prograin and the Aricultural Ad.justment Adninistration Program but rose asain in 1938.

Resion XXV - Icuisiana-Texas Coast
This gulf-coastal resion extends from Houston and Galveston on the West to New Orleans on tre east. Rice, suear cane, stramberries, and mixed farming are found in this region.

| Class | Inumer | Preont of national total |
| :---: | :---: | :---: |
| Total | 1,625,718 | 1.8 |
| Rural-iors | 260,969 | 0.5 |
| Iural-nonfera | 300,868 | 1.5 |
| Urban | 1,064,881 | 1.5 |

The recion comines five cultural subreঞions, two of which comprise the Houston-Galveston (Subregion 186) and the Nem Orleans (Subregion 130) Metropolitan districts. Outside those urbanized sections the region is characterized by a low level of livine and hich population fertility. Except in the wostorn pait of the region general reliof ratos vere exceedinely low in recent yoars, out this foct carrot be taken as an indication of the economic condition of the farm population since many families havo been receiving other forms of assistence or have been without means of meeting their needs.

Region XXVI - Inwer Atlantic Coastal Plains
This region consists of a coastal strip extending southward from Wilmington, North Caroline, throush northern Florida and westward to

New Orleans. Farmins in this region is of a mixed type generaly. Truck, potatocs, cotton, dairy products, livestock, pouitry, and forest procucts are of importance in various sections. There is a consjderable amount oî sclf-sufficing and part-time farning.

| Clcss | Furaber | Percent of national total |
| :---: | :---: | :---: |
| Totai | 1,429,565 | 1.2 |
| Rural-farm | 372,834 | 1.2 |
| Rural-nonfarm | 461,011 | 1.9 |
| Urban | 595,720 | 0.9 |

The region combines nine subregions in which the plane of living is senerally low but quite variable. The poprlation fertility rates are internediate or hish. Fern tenancy rates are lom, but very large proportions of the farms produce less than $\$ 1,000$ eross income. Relief rates have been persistently high in nest of the region.

Region XXVII - Ilorida Poninsula
The southern tip, includine firuit and truck farms, of Florida constitutes this region.

| Class | Nunber | Fercent of national total |
| :---: | :---: | :---: |
| Total | 798,747 | 0.7 |
| Ruxal-farm | 80,141. | 0.3 |
| Rural-nonfarn | 200,453 | 0.9 |
| Urben | 509,107 | 0.7 |

In this subtropical area of everlades and flatwoods with farming restricted to particular localitiss the ruxal-farm plane of living is internediate in the three subregions included while the population fertility ratio is low. Farming is hishly commercialized, and there is comparatively little farm tenancy. About half of the farms produced less than $\$ 1,000$ gross income in 1929. Farm laborers constitute a discdvantaged group in the resion and relief ratos have been high in sone sections. Region XXVIII - Chesapeake-Albemarle Coast

This region includes southern Maryland, the Virginia and Maryland eastern shore, southern Delaware, eastern Virginia, and northeastern North Carolina. The type of farming in this region is varied. General, self-sufficing, truck, forest products, nd part-time farming are practiced in the Virginia Tidewater section. Genoral farming, poultry, truck, fruit, and potatoes are typical of the Wastern Shore section. Tobacco farms are found in southern Mnryland, ard mixed faring is followed in the North Carolina coastal section.

| Cluss | Number | Percent of national total |
| :---: | :---: | :---: |
| Total | 1,049,954 | 0.9 |
| Rural-farn | 277,923 | 0.9 |
| Rural-nonfarm | 307,911 | 1.3 |
| Urban | 464,120 | 0.7 |

This reşion is segmented by bays and rivers and is not uniform culturally. It combines seven subregions two of which are larcely metropolitan sections around Richmond (Subresion 203) and around Norfolk and adjacent cities (Subregion 208). Except in the North Carolina counties, where it is low, the plane of living is intemediate. The ratio of
children to wonen in the farm population is low or intermediate except in southern Maryland (Subregion 205) where it is high. Negroes are found in varying proportions in the farm population throughout the resion. In February 1935 relief rates variod anong the counties of the region from very low to over 30 percent.

Region XXIX - New York-Boston Metropolitan
Bastern Massachusetts, Rhode Island, southern Connecticut, the southeastern section of New York State, including New York City, and northeastern New Jersey constitute a netropolitan region. Only about one-half of 1 percent of the population of this area lived on farms in 1930, but it contains 19.4 percent of the Nation's urban population. The farms in the region consist largely of daimy, truck, poultry, and part-time farms and country estates.


The snall farm population is hishly urbanized and forms part of the metropolitan community. The rural-farm plane of living index is higher than in any other area, while the region ranks close to tho bottom in rural-farm population fertility.

## Measurement of Regional Difforences

The first step in the determination of cultural regions within the rural-farm population of the United States was the selection of measurable characteristics those variations were considered sufficiently important to differentiate one area from another. Since the technique involved the setting of definite boundary lines within which statistics could be compiled, the county was of necessity the basic unit, and the indices used were those for which data were available by counties.

The corplexity of dealing statistically with a large number of indices together with the fact that one trait, such as the proportion of Negroes, may be of great significance in one part of the Nation and of negligible importance in another made the selection of indices a difficult one. Widely significant indices were used to deterrine the broad general areas, while additional criteria of more local significonce were utilized in deliniting the subregions.

From the Fifteenth Census of the United States, the 1935 Census of Agriculture, from various relief censusos, and from other sources a number of ratios represunting county averafes were computed for every county. The index card, one of which whs nade for each county in the United States, contained in addition to the narne of the State and county, the size interval of the largest population center with more than 2,500 inhabitants, the major type of farming and the mojor nonfarn industries in the county. The card contained the rollowing ratios pertaining especially to the rural-farr population.
a. Percentage of farm tenacy 1930 and 1935
b. Ratio of farm wage workers to all agricultural workers (1930)
c. Land value per capita of the rural-farm population (1930)
d. Median farm income per farm (1929)
e. Per worker agricultural income (1929)
f. Percentace of farms producing products valued at less than given amounts in 1929 (Amounts: \$250; \$400; \$600; \$1,000; \$1,500; and \$2,500)
g. Plane-of-living index (1930) (Combined average value of farm dwelling, and the percentage of farms having telephones, the percentage having automobiles, electric lights, running water, and radios.)
h. Children under 5 per 1,000 woimen 20-44 (1930)
i. Percentage of crop acreage in crop failure (1934)
j. Percentage of Negroes (1930)
k. Percentage of "other races" (1930)

1. Percentage of youth 16-17 attending school (1930)
iil. Percentage change in the rural-farm population (1930-1935)
n. Percentage of total value of farm products used by operator's family (1929)

- Average value of farn direlling (1930)
p. Percentage of total land area in farms (1930)
q. Percentage of products produced on farms of given types (1929)

The decision to limit the present study to rural-farm characteristics had the advantage of providing a common derominator throughout the study and of making possible some rofinemont in the original ratios.

From the available social and economic indices based on farms or on the rural-farm population, those considered most important after prelininary testing were used as factors in detormining boundaries. These included the plane-of-living index, ratio of children to women, percent of farm tenancy in 1935, percent of farms producing less than $\$ 1,000$ (or less than $\$ 600$ ) in 1929, per capita land value, and percent of cgricultural products consumed on the farms in 1929. In the South the percent of Negroes was used as an additional factor. In the Far West the percent of farm wage workers and in the Southwest the percent of "other races" mere used as added factors. Because of its significant
relationship to rural-farm factors, the ratio of rural-farm population to total rural population was used as an additional factor.

Intercorrelation analysis of the factors used as bases for the delineation of areas showed that the intensity of relationship among them differed not only with the pairs of items correlated but also by sections of the country. As a general condition, however, no two of the factors were so highly correlated that omission on that basis was considered advisable. For example, in the Appalachian-Ozark the highest correlation was found between the percent of products consumed on the farm and per capita land value but in that instance the rank-difference coefficient was only +.79. ${ }^{5}$

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Rank difference coefficients of correlation between rural-farm factors in 31 sample counties in the Appalachian-Ozark Region:

| Factor | Plane of living | Ratio of chjildren to women | $\begin{aligned} & \text { Persent } \\ & \text { farm } \\ & \text { tenancy } \end{aligned}$ | Percent <br> 0 Of farms <br> producing <br> less than <br> \$1,000 <br> gross <br> income | Per <br> capita <br> land <br> value | Percent of farm products consumed on the farm |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plane of living | - | -. 57 | -. 49 | -. 53 | +.74 | -. 51 |
| Ratio of children to women | -. 57 | - | +. 10 | $+.42$ | -. 62 | +. 66 |
| Percent farm tenancy | -. 49 | +. 10 | - | -. 03 | -. 36 | +. 08 |
| Percent of farins producing less than $\$ 1,000$ | -. 53 | +. 42 | -. 03 | - | .. 66 | $+67$ |
| Per capita land value | +. 74 | -. 62 | -. 36 | -. 66 | - | -. 79 |
| Percent of farm products consumed on the farm | -. 51 | +. 66 | +. 08 | +.67 | -. 79 | - |
| Percent of rural population residing on farms | -. 21 | +. 04 | +. 24 | $+.03$ | -. 08 | -. 27 |

The comparison of each of the 3,072 counties in the whole Un ted States with the national average in respect to any trait is at best a crude process. Hence, it was necessary as a preliminary step to arrive at a general approximate pattern of areas within the rural-farm population so that each general area could be subjected to more detailed analysis by reason of the facts that the range of variation had been condensed and that areas within which local indices were applicable had been delimitcd. 1. As a rough first approximation to culture areas, major typeooffarming areas were delineated by counties. Type of farming, depending as it does upon such physical factors as soil, climate, and topography, on the one hend, and upon such cconomic considerations as facilities for transportation and communication, on the other, necessarily has a profound effect upon the social and economic life of those engaged in agriculture.

Since the relevancy of type of farming as an index was recognized, the country tas divided into 20 areas on this basis. These arcas consisted of aggregations of geographically contiguous counties, most of which possessed considerable homogeneity with respect to the major crop source of agricultural income. ${ }^{6}$ Those original areas were as follows:

1. Eastern Cotton Area
2. Western Cotton Area
3. Appalachian Area
4. Ozark Area
5. Cora Bclt
6. Eastern Dairy Area
7. Western Dairy Area
8. Lake States Cut-Over Area
9. Spring Theat Area
10. Winter Wheat Area
11. Ranching and Irrigated Farming Area
12. Columbia Plateau Wheat Area
13. General Farming Area
14. California Fruit and Truck Area
15. Florida Fruit and Truck Area
16. Eastein Tobacco Area
17. Western Tobacco Area
18. Northerm Pacific Coast
19. Southwestern Texas
20. Atlantic Flatwoods
21. Miscellaneous
22. For a second approximation to culture areas the following steps rere taken:
a. Counties in each major type-of-farming area were classified to three varjables--rural-farn plane-of-living index, population fertility ratio, and percent of farm tenancy in 1935. All three of these factors were considered particularly pertinent because of their high correlation with many other factors in rural-farm culture as woll as being important socio-economic variables in and of tremselves.
b. For each variable the median and sverage devintion wore computed for each area. Thus it wos possible to comnare adjacent areas with respect to averages and variability, using each of the three indices. Borderline counties that had indices lying closer to the median of an adjacent area than to the original type-of-farming area on at loast two of the three indices were then shifted in order to reduce the total variation of counties from the area average. In this way the boundaries of exich of the original areas were changed considerably to make the area more homogeneous units. The counties within these approximate areas vere used as the basis for determinilig subregions.

This framework of tentative areas made possible the examination of various section; of the country in more detail than was possible in dealing with the whc le Nation. Accordingly, within each area the counties were exanined w: th respect to a number of indices by the following methor•

1. First ap oximetion to subregions
a. The wo county indices considered most pertinent, rural plane-of-living index and population fertility rasio, were converted into percentile scores based on the ranizing of counties within the tentative areas. These rank scores were written in each county on a large outline mar.
b. When the rank scoros mere transcribed to a nap, careful exanination of the geographical distribution of scores was made to find conters of relatively small variation. Lines were drawn around such centers following lines of clear demarcation between counties, that is, lines of sharp differences between counties with respect to percentile ranks.? This method grouped contiguous counties that possessed relative homogencity with respect to the two important socio-economic factors, important in and of themselves and because they are closely associated with numerous other factors. In addition, the type-of-farm factor was held fairly constant as a result of the previous steps of deternining
crude areas. Thesc groupings of contiguous counties were then taken as the first approximation to subregions.

## 2. Second approximation

When the groups of contiguous counties resulting from the first approximation to subregions had been segregated they were grouped with respect to the value of the pertinent local factors selected for use in rural-farm regionalization. These again included the plane-of-living index and population fertility ratio. The additional indices generally used were percent of farm tenancy in 1935, percent of farms producing less than a given amount of income in 1929, percent of farm produce used on the farm, per capita land value, and percent of rural poprelation residing on farms. The percent of Negroes, percent of other races, and percont of farm wage workers were used in areas where these factors were considered particularly pertinent. For each index geographically contiguous groups of counties were compared with respect to corresnonding medians and deviations. Those ad.jacent groups that did not differ in important respects from each other on any indcx were then combined. This merging of contiguous groups with similar medians and averase deviations constituted the second approximation to subrogions.

## 3. Final approximation

Medians and average deviations were again computed for each group of counties resulting from the second approximation using the same indices. For each group of counties those lying within the limits defincd by the median plus the average deviation and
by the median minus the average deviation on most or all variables were considered in their proper subregion and were checked no further. Those counties outside of the limits on most or all of the variables wore further checked to find whether the total amount of variation could be reduced by shifting them to an adjacent subarea. In determiring whether such shifts should be made, a simple procedure was pursued. For each county whose subarea allocation was in question, computations were made as indicated in the following table.

County $\qquad$

| Index | Subregion |  |  | Adjacent subregion |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Sub } \\ \text { regional } \\ \text { median } \end{gathered}$ | County variation from median | Percent variation from median | Sub- <br> regional <br> Inedian | $\quad$ County variation from medinn | Percent variation from median |
| a <br> b <br> c <br> d etc. |  |  |  |  |  |  |
| Total | - | - |  | - | - |  |

The columns "percent variation from median" were totaled, and the county was finally allocated to the subarea showing' the smallest total variability. This process had the effect of reducing the total amount of variability to a minimum.

The procedure to this point may be summarized as follows: Crude areas of general similarity were laid out on the basis of type of farming and the comparison of each county with the national average of three dominant socio-economic factors. Within these crude areas subregions were determined by comparison of county and area averages and by shifting borderline counties which conformed
more closely to adjoining subregions.
The application of this procedure resulted in 210 subregions of varying sizes ranging all the way from isolated urbanized counties to the Black Belt of the Cotton South with 87 counties (see map 1).

## 4. Final areas

When the work of differentiating the 210 subregions was completed, these were considcred as units independent of the crude area delineation. For each subregion the median county with respect to the factors used in the differentiation was found. Using these subregions as new units, they were grouped according to their similarity with respect to the several social factors used in the study into new regions. To accomplish this several simple steps were taken. In the first place, the rank of each subregion was determined on the scale of subregion averaces for the several indices. For examole, the subregions were ranked in order from the lowest to highest average plane-of-iivirg index and population fertility ratio, and were numbered accoiding to their rank on each factor from 1 to 210. Using these ranks and subregions were divided into nine groups representing the several combinations of highest, lowest, and intermediate ranks with respect to the average plane-of-Iiving index and the average population fertility ratio. This classification of the 210 subregions is shown in the following table:

Subregions by ratio of
Childron to Women and Plan of Iiving

| Median ratio of <br> children to women | Median plane-of-living index |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $8-53$ | $54-113$ | $114-318$ | motal |  |
| $406-678$ | 2 | 22 | 47 | 71 |
| $679-802$ | 15 | 35 | 19 | 69 |
| $803-1,104$ | 52 | 12 | 6 | 70 |
| Total | 69 | 69 | 72 | 210 |

From each of the nine subgroups indicated in this table those subregions that were geographically contiguous were delineated on a map as tentative regions. Each interstitial subregion was fitted into the adjoining area whose average it most closely resembled, and certain int rregional shifts or area subdivisions were made where such was demanded by divergencies in additional factors. The results gave 29 areas combining the 210 subregions (nap 1). (For subregion ranks with respect to plane of living and population fertility, see map 2).

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TABLE I.--COUNTY MEDIANS OF SELECTED FACTORS WITHIN THE RURAL-FARM POPULATION, BY REGIONS
Table 1.--County Medians of Selected Factors Within the Rural-Farm
PRODUCING
less than
$\$ 1,000$
$(1929)$


| PERCENT OF |
| :--- |
| PRODUCTS |
| CONSUMED |
| ON THE FARM |
| $(1929)$ |


PERCENT
OF RURAL
POPULATION
RESIDING
ON FARMS
$(1930)$

-
-
都
-
13325 Population, by Regions-Continued

| Percent | LaND Value |
| :---: | :---: |
| of Farms | PER Capita |

OF THE
RURAL -FARM
POPULATION
$(1930)$
$\simeq$ $\underset{\mathcal{J}}{\text { }}$ MN N
7 Ty ny fo
pOPULATION
RESIDING

| ON THE FARM | ON FARMS |
| :---: | :---: |
| $(1929)$ | $(1930)$ |


$\qquad$
Percent of products CONSUMED (1929)

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8 ㅇ in in $m$
tenancy
(1935)

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CULTURAL REGIONS WITHIN THE RURAL FARM POPULATION


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    Odum, Howard, Southern Regions of the United Statos, Chapel Hill: The University of North Carolina Press, 1936.

[^1]:    ${ }^{4}$ Two subareas rank high and one ranks low on the population fertility ratio.

[^2]:    

